an array of scintillators optically coupled to said photosensor array and separated therefrom by a gap, said gap filled with a compliant clear film positioned distanced from at least one of said array of scintillators and said photosensor array less than one-half of a wavelength of light emitted by said scintillators;

a clamping mechanism clamping said array of scintillators in place above and aligned with said photosensor array, wherein said clamping mechanism has a thermal coefficient of expansion less than that of said substrate; and

a flexible electrical cable electrically coupled to the photosensor array.

5. (twice amended) A finished detector module assembly suitable for use in a computed tomography (CT) imaging system, said detector module comprising:

a substrate;

a photosensor array mounted on the substrate;

an array of scintillators optically coupled to said photosensor array and separated therefrom by a gap, said gap filled with a compliant clear film positioned distanced from at least one of said array of scintillators and said photosensor array less than one-half of a wavelength of light emitted by said scintillators;

a clamping mechanism clamping said array of scintillators in place above and aligned with said photosensor array, wherein said clamping mechanism comprises a silica glass containing titanium oxide, said array of scintillators comprises yttrium gadolinium oxide and an epoxy reflector material, and said substrate comprises a ceramic; and

a flexible electrical cable electrically coupled to the photosensor array.

7. (twice amended) A finished detector module assembly suitable for use in a computed tomography (CT) imaging system, said detector module comprising:

a substrate;

a photosensor array mounted on the substrate;

an array of scintillators optically coupled to said photosensor array and separated therefrom by a gap, said gap filled with a compliant clear film positioned distanced from at least one of said array of scintillators and said photosensor array less than one-half of a wavelength of light emitted by said scintillators;

a clamping mechanism clamping said array of scintillators in place above and aligned with said photosensor array, wherein said photosensor array and said array of scintillators have facing surfaces, and wherein at least one of said facing surfaces is coated with an antireflection film, wherein said surface of said array of scintillators is coated with said antireflection film; and

a flexible electrical cable electrically coupled to the photosensor array.

24. (twice amended) A method for making a finished detector module suitable for use in computed tomography (CT) imaging systems, the finished detector module including a photosensor array optically coupled to an array of scintillators, said method comprising the steps of:

adhesively bonding a photosensor array to a substrate;

electrically bonding a flexible cable to the photosensor array;

preforming a compliant, clear film into a size and shape configured for placement between and optical coupling of the photosensor array to an array of scintillators;

placing the preformed film on top of the photosensor array;

placing a scintillator array on top of the preformed film, the scintillator and the preformed film separated by a gap less than one-half of a wavelength of light emitted by the scintillators;